

AMENDMENTS TO THE CLAIMS

1. (Canceled)

2. (Currently amended) An ion elution unit that generates metal ions from electrodes when a drive circuit applies a voltage between the electrodes,

the ion elution unit comprising:

a water feed valve for feeding water to the ion elution unit; and

a control unit configured to control the drive circuit when the water feed valve is feeding water to the ion elution unit to firstly apply the voltage between the electrodes by applying a positive voltage potential to a first electrode during a first adjustable voltage application period to cause the first electrode to act as an anode relative to a second electrode acting as a cathode so that the first electrode will provide the metal ions during the first adjustable voltage activating period, to secondly apply no voltage difference between the first and second electrodes during an adjustable voltage application halt period, and thirdly to apply the positive voltage to the second electrode during a second adjustable voltage application period to cause the second electrode to act as the anode relative to the first electrode acting as the cathode so that the second electrode will provide the metal ions during the second voltage activating period, the control unit being further configured to adjust at least one of the length of the first adjustable voltage application period, the length of the adjustable voltage application halt period, the length of the second adjustable voltage application period, and the length of an overall ion elution period that includes at least the first adjustable voltage application period, the adjustable voltage application halt period, and the second adjustable voltage application period to adjust the amount of eluted metal ions being produced to a desired level,

wherein the electrodes are disposed along water current fed, and

wherein metal ion eluted from the electrodes are either silver ions, copper ions. or zinc ions.

3. (Canceled)

4. (Previously presented) The ion elution unit according to claim 2, wherein the control unit is further configured to control the drive circuit to adjust the voltage applied to the electrodes during at least one of the first adjustable voltage application period and the second adjustable voltage application period such that a constant current flow between the electrodes can be maintained.

5. (Previously presented) The ion elution unit according to claim 2, further comprising:

a current detection unit for detecting current flowing between the electrodes,
wherein the control unit is further configured to control the drive circuit based on the current flowing between the electrodes detected by the current detection unit and to check operation of the current detection unit before the drive circuit is controlled by the control unit to apply any voltage to the electrodes.

6. (Previously presented) The ion elution unit according to claim 2, further comprising:

a current detection unit for detecting current flowing between the electrodes,
wherein the control unit is further configured to control the drive circuit based on the current flowing between the electrodes detected by the current detection unit and to check detection operation of the current detection unit a predetermined period of time after the drive circuit is controlled by the control unit to apply any voltage to the electrodes.

7. (Previously presented) The ion elution unit according to claim 2, further comprising:

a current detection unit for detecting current flowing between the electrodes; and
a warning indicator,
wherein the control unit is further configured to control the drive circuit based on the current flowing between the electrodes detected by the current detection unit, and, when the current detection unit detects abnormal current, the control unit is further configured to control the warning indicator to issue a warning to notify a user of abnormality.

8. (Previously presented) The ion elution unit according to claim 7, wherein even if the current detection unit detects abnormal current, so long as normal current has been detected at least once during an ion elution process, the control unit does not give the warning indicator an instruction that makes the warning indicator issue the warning to notify the user of the abnormality.

9. (Previously presented) The ion elution unit according to claim 2, further comprising:

a current detection unit for detecting current flowing between the electrodes,

wherein the control unit is further configured to control the drive circuit based on the current flowing between the electrodes detected by the current detection unit, and, when the current detection unit detects that the current flowing between the electrodes is equal to or less than a predetermined level, the control unit controls the drive circuit to adjust at least one of the length of the first adjustable voltage application period, the length of the adjustable voltage application halt period, the length of the second adjustable voltage application period, or the length of the overall ion elution period.

10. (Previously presented) An appliance that incorporates the ion elution unit as set forth in claim 2, the control unit also controlling the operation of the appliance that includes an operation requiring water mixed with metal ions generated by the ion elution unit.

11. (Previously presented) The appliance according to claim 10,

wherein the control unit is further configured to control the drive circuit to make the drive circuit adjust the overall ion elution period according to the amount of water used.

12. (Previously presented) The appliance according to claim 10,

wherein the control unit is further configured to control the drive circuit to make the drive circuit adjust at least one of the length of the first adjustable voltage application period, the length of the adjustable voltage application halt period, and the length of the second adjustable

voltage application period according to the amount of water used or according to the overall ion elution period.

13. (Previously presented) The appliance according to claim 10, further comprising:
a flow rate detection unit for detecting the volume of water flowing in the ion elution unit,

wherein the control unit is further configured to control the drive circuit based on a result of detection by the flow rate detection unit to make the drive circuit adjust at least one of the length of the first adjustable voltage application period the length of the adjustable voltage application halt period, and the length of the second adjustable voltage application period, or the overall ion elution period.

14. (Previously presented) An appliance that incorporates the ion elution unit as set forth in claim 5, wherein when the current detection unit detects abnormal current, the control unit executes specified countermeasures.

15. (Original) The appliance according to claim 14, wherein the specified countermeasure is a temporary stop of the appliance operation.

16. (Previously presented) An appliance that incorporates the ion elution unit as set forth in claim 5, wherein, when the current detection unit detects that the current flowing between the electrodes is equal to or less than a predetermined level, the control unit controls the water feed valve to make the water feed valve reduce the volume of water flow fed to the ion elution unit and controls the drive circuit to make the drive circuit extend the overall ion elution period.

17. (Original) The appliance according to claim 10, wherein the appliance is a washer.

18. (Original) The appliance according to claim 11, wherein the appliance is a washer.

19. (Original) The appliance according to claim 12, wherein the appliance is a washer.

20. (Original) The appliance according to claim 13, wherein the appliance is a washer.

21. (Original) The appliance according to claim 14, wherein the appliance is a washer.

22. (Original) The appliance according to claim 15, wherein the appliance is a washer.

23. (Original) The appliance according to claim 16, wherein the appliance is a washer.

24. (Currently amended) An ion elution unit that generates silver ions by applying a voltage between electrodes disposed in a water feed passage, comprising:

a drive circuit for applying the voltage between the electrodes;

a water feed valve for feeding water to the ion elution unit; and

a control unit configured to control the drive circuit when the water feed valve is feeding water to the ion elution unit to firstly apply the voltage between the electrodes by applying a positive voltage potential to a first electrode during a first adjustable voltage application period to cause the first electrode to act as an anode relative to a second electrode acting as a cathode so that the first electrode will provide the metal ions during the first adjustable voltage activating period, to secondly apply no voltage difference between the first and second electrodes during an adjustable voltage application halt period, and thirdly to apply the positive voltage to the second electrode during a second adjustable voltage application period

to cause the second electrode to act as the anode relative to the first electrode acting as the cathode so that the second electrode will provide the metal ions during the second voltage activating period, the control unit being further configured to adjust at least one of the length of the first adjustable voltage application period, the length of the adjustable voltage application halt period, the length of the second adjustable voltage application period, and the length of an overall ion elution period that includes at least the first adjustable voltage application period, the adjustable voltage application halt period, and the second adjustable voltage application period to adjust the amount of eluted metal ions being produced to a desired level,

wherein the electrodes are disposed along water current fed.